



PATENT
Atty. Docket No. J-3894

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant(s): James R. Crapser

Serial No.: 10/777,079

Filed: February 13, 2004

For: Wick-based Delivery System
Incorporating a Capillary Member

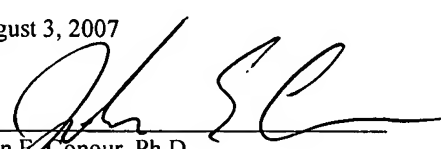
Group Art Unit: 3749

Examiner: Gregory A. Wilson

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August 3, 2007


John E. Conour, Ph.D.
Reg. No. 59,054
Agent for Applicant(s)

TRANSMITTAL LETTER

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Sir:

Submitted herewith is Appellant's Appeal Brief with respect to the Appeal taken to the Board of Patent Appeals and Interferences in the above-identified application.


Please charge our credit card per the attached PTO Form 2038 *Credit Card Payment Form* in the amount of \$500.00, for the fee for filing the Appeal Brief. The Commissioner is hereby authorized to charge any fees that may be required under 37 CFR 1.17(f) or any deficiency therein to Deposit Account No. 50-1903. A copy of this transmittal is attached. Any overpayment in fees should be refunded to McCracken & Frank LLP at the address below.

Respectfully submitted,

McCracken & Frank LLP
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Chicago, Illinois 60606
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August 3, 2007
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By:


John E. Conour, Ph.D.
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IN THE UNITED STATES
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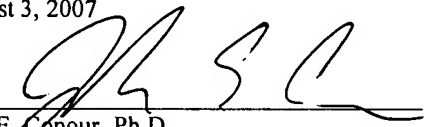
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John E. Conour, Ph.D.
Registration No. 59,054
Agent for Applicants

APPEAL BRIEF

Mail Stop Appeal Brief-Patent
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This appeal is filed in response to the final Office action dated January 30, 2007, and the Advisory Action dated April 11, 2007.

08/07/2007 HLE333 00000027 10777079

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(i) Real party in interest.

This appeal is made on behalf of S. C. Johnson & Son, Inc., 1525 Howe Street, Racine, WI 53403, as owner of the complete interest in the present application.

(ii) Related appeals and interferences.

At present, there are no appeals, interferences, or judicial proceedings known to appellant, the appellant's legal representative, or assignee which will directly affect or will be directly affected by or have a bearing on the Board's decision on the pending appeal.

(iii) Status of claims.

Claims 1-6 and 8-23 stand rejected. Claim 7 has been canceled.

The rejection of claims 1-6 and 8-23 is appealed hereby.

(iv) Status of amendments.

The claims stand as amended by Amendment B filed November 30, 2005.

(v) Summary of the claimed subject matter.

Independent claim 1 recites an evaporative device that includes a container 1 for holding a liquid, wherein the container has an opening. The device also includes a porous wick 3 that extends through the opening such that a portion of the wick contacts the liquid held within the container 1 (see on page 7, paragraph 28 – second – fourth sentences and paragraph 30 - second sentence describing a conventional device and a preferred embodiment). A portion of the wick 3 is exposed to the ambient environment, and the wick transfers the liquid from the container 1. The evaporative device further includes a capillary member 6 that has a surface in communication with a portion of the wick 3. The capillary member 6 has a nonporous capillary channel 7 that extends radially from the wick 3 (see on pages 7-8, paragraph 31 – second and third sentences).

Independent claim 4 recites an evaporative device that includes a container 1 for holding a liquid, wherein the container has an opening. The device further includes a porous wick 3 that extends through the opening such that a portion of the wick contacts the liquid held within the container 1 (see on page 7, paragraph 28 – second – fourth sentences and

paragraph 30 - second sentence). A portion of the wick 3 extends outside of the container 1 such that the wick transfers the liquid from the container. Still further, the device includes a capillary plate 6 that has a surface in communication with a portion of the wick 3. The surface has nonporous capillary channels 7 that extend radially from the wick 3 (see on pages 7-8, paragraph 31 – second and third sentences) along the surface of the capillary plate 6. The capillary channels 7 are substantially continuous along lengths thereof (see on page 8, paragraph 31 – second sentence from the top of page 8).

Dependent claim 9 recites that the capillary channels 7 of claim 8 are substantially V-shaped in cross section.

Independent claim 12 recites an evaporative device that includes a container 1 for holding a liquid, wherein the container has an opening. The device further includes a porous wick 3 that extends through the opening such that a portion of the wick contacts the liquid held within the container 1 (see on page 7, paragraph 28 – second – fourth sentences and paragraph 30 - second sentence). A portion of the wick 3 extends outside of the container 1 such that the wick transfers the liquid from the container. Still further, the device includes a cover that encases a portion of the portion of the wick 3 extending outside of the container 1 (see on page 16, paragraph 57 – third sentence). Still further, the device includes a capillary plate 6 that has a surface in communication with a portion of the wick 3. The surface has one or more capillary pathways 7 along which liquid, transferred by the wick 3 from the container 1, is drawn by capillary action for dispersion to the ambient environment. The capillary pathways 7 are substantially continuous along lengths thereof (see on page 8, paragraph 31 – second sentence from the top of page 8).

Dependent claim 13 recites the evaporative device of claim 4 with plural capillary plates 6a, 6b, each having one or more capillary channels 7, and the capillary channels are in communication with the portion of the wick 3 extending outside of the container 1 (see on page 12, paragraph 44).

Dependent claim 14 recites that the plural capillary plates 6a, 6b of claim 13 are movable such that the capillary channels 7 of each are removable from communication with the portion of the wick 3 extending outside of the container 1 (see on page 12, paragraph 45 – first sentence).

Independent claim 15 recites an evaporative device that includes a container 1 for holding a liquid, wherein the container has an opening. The device further includes a porous wick 3 that extends through the opening such that a portion of the wick contacts the liquid held within the container 1 (see on page 7, paragraph 28 – second – fourth sentences and paragraph 30 - second sentence). The evaporative device further includes a capillary plate 6 having a surface in communication with a portion of the wick 3. The surface has one or more capillary pathways 7 along which liquid, transferred by the wick 3 from the container 1, is drawn by capillary action for dispersion to the ambient environment. The capillary pathways 7 are substantially continuous along lengths thereof (see on page 8, paragraph 31 – second sentence from the top of page 8). There are plural capillary plates 6a, 6b, each having one or more capillary pathways 7, and the capillary pathways are in communication with the portion of the wick 3 extending outside of the container 1 (see on page 12, paragraph 44). The plural capillary plates 6a, 6b are movable such that the capillary pathways 7 of each are removable from communication with the portion of the wick 3 extending outside of the container 1 (see on page 12, paragraph 45 – first sentence). Further, that the plural capillary plates 6a, 6b are actuatable in a direction away from the wick 3 to separate the capillary pathways 7 thereof from communication with the portion of the wick exposed to the ambient air (see on page 12, paragraph 45 – third sentence).

Independent claim 22 recites an evaporative device that includes a container 1 for holding a liquid, wherein the container has an opening. The device further includes a porous wick 3, 3a that extends through the opening such that a portion of the wick contacts the liquid held within the container 1 (see on page 7, paragraph 28 – second – fourth sentences and paragraph 30 - second sentence). A portion of the wick 3, 3a is exposed to the ambient environment, and the wick transfers the liquid from the container 1. The evaporative device further includes a nonporous capillary member 6, 8 that has a surface in communication with a portion of the wick 3, 3a (see on page 13, paragraph 48). One or more capillary pathways 7, 9 are disposed along the surface of the capillary member 6, 8 along which liquid, transferred by the wick 3, 3a from the container 1, is drawn by capillary action for dispersion to the ambient air (see page 4, paragraph 14 – sixth sentence). The capillary member 6, 8 is a capillary insert with at least one capillary channel 7, 9 formed thereon (see page 13, paragraph 47 – first sentence). A portion of the at least one capillary channel 7, 9 is in

communication with a portion of the wick 3, 3a such that the capillary channel transfers liquid from the wick for dispersion to the ambient environment (see on page 8, paragraph 31 – first sentence and on page 10, paragraph 37 first sentence and paragraph 38 – first sentence). The wick 3a includes an aperture formed in a portion of the wick in an axial direction (see page 13, paragraph 47 – third sentence). The capillary insert 8 is disposed within the aperture such that the at least one capillary channel 9 is in contact with an inner surface of the wick 3a to transfer liquid from the wick to the capillary channel for dispersion to the ambient environment (see on page 13, paragraph 48 and on page 14, paragraph 49).

Independent claim 23 recites an evaporative device that includes a container 1 for holding a liquid, wherein the container has an opening. The device further includes a porous wick 3, 3a that extends through the opening such that a portion of the wick contacts the liquid held within the container 1 (see on page 7, paragraph 28 – second – fourth sentences and paragraph 30 - second sentence). A portion of the wick 3, 3a is exposed to the ambient environment, and the wick transfers the liquid from the container 1. The evaporative device further includes a nonporous capillary member 6, 8 that has a surface in communication with a portion of the wick 3, 3a (see on page 13, paragraph 48). One or more capillary pathways 7, 9 are disposed along the surface of the capillary member 6, 8 along which liquid, transferred by the wick 3, 3a from the container 1, is drawn by capillary action for dispersion to the ambient air (see page 4, paragraph 14 – sixth sentence). The capillary member 6, 8 is a capillary insert with at least one capillary channel 7, 9 formed thereon (see page 13, paragraph 47 – first sentence). A portion of the at least one capillary channel 7, 9 is in communication with a portion of the wick 3, 3a such that the capillary channel transfers liquid from the wick for dispersion to the ambient environment (see on page 8, paragraph 31 – first sentence and on page 10, paragraph 37 first sentence and paragraph 38 – first sentence). The wick 3a includes an aperture formed in a portion of the wick in an axial direction (see page 13, paragraph 47 – third sentence). The capillary insert 8 is disposed within the aperture such that the at least one capillary channel 9 is in contact with an inner surface 3i o f the wick 3a to transfer liquid from the wick to the capillary channel for dispersion to the ambient environment (see on page 13, paragraph 48 and on page 14, paragraph 49). The capillary insert 8 is slidable within the wick 3a (see on page 14, paragraph 49 – first and second sentences).

(vi) Grounds of rejection to be reviewed on appeal.

Applicant requests review of the following grounds of rejection on appeal:
whether claims 1-6, 8, 10-12, and 15-21 are anticipated under 35 U.S.C. § 102(b) by
Miller et al. U.S. Patent No. 5,875,968; and
whether claims 9, 13, 14, 22, and 23 are obvious under 35 U.S.C. § 103(a) in view of
Miller.

(vii) Argument.

A) Because Miller does not disclose, suggest, or consider the possibility of a porous wick extending through an opening in a container and a capillary member that has a surface in contact with a portion of the porous wick and a nonporous capillary channel or pathway, claims 1-6, 8, 10-12, and 15-21 are not anticipated by Miller under 35 U.S.C. § 102(b).

Miller discloses a nonporous wicking mechanism to transfer a liquid air freshener 22 to a vapor-emanating means 17. Miller does not disclose a porous wick and a capillary member in communication with the wick, as recited in claims 1-6, 8, 10-12, and 15-21. The term “porous wick,” as recited in the claims, is defined in the present application as “wick 3 material contain[ing] numerous small, internal, interconnecting pores. When liquid contacts those pores, it is elevated by principles of surface tension due to attractive forces, causing the liquid to be drawn into adjacent pores. As this process continues, the liquid migrates through the porous material.” (See on page 2, paragraph 6 – second – fourth sentences). No where in Miller is an evaporative device disclosed that has a porous wick extending through an opening of a container and a capillary member that has surface in communication with a portion of the wick and a nonporous capillary channel or pathway, as recited in the above-noted claims. Anticipation requires that the identical invention is shown in a single art reference in as complete detail as is contained in the claim. Therefore, the single art reference must disclose each and every element of the claimed invention as arranged in the claims. See MPEP § 2131. The anticipation rejection of the above-noted claims is therefore improper and should be withdrawn.

In fact, the only porous-like structure disclosed in Miller is the liquid-permeable absorbent matrix of the vapor-emanating means 17. However, the vapor-emanating means 17 does not extend through the opening of a container to contact the liquid held within the container, as recited by or arranged in the claims at issue.

Further, the only element that does extend through the opening of container 12 is the non-porous container 14 that is “constructed of thermoplastic compositions [including] polyethylene, polypropylene, polystyrene, polyvinyl acetate, polyamide, polymethacrylate, and the like.” (See Column 4, lines 48-49 and 52-53). Additionally, the disclosure of Miller

clearly indicates that the air freshener medium 22 can only be dispensed from the device 10 through a pierced membrane 20. (See Column 3, lines 41-57). Further, as stated in Column 2-3, lines 66-67 and 1-2, respectively, an “object of the invention [is] to provide an air freshener dispenser device in which a liquid air freshener is transported from an enclosed reservoir to a vapor-emanating surface by capillary action with a nonporous wick structure.” Therefore, the container 14 must be impervious and thus non-porous to the air freshener medium 22.

Miller, therefore, does not disclose, suggest, or consider the possibility of all of the elements recited by the claims at issue. It follows, therefore, that none of the claims at issue is anticipated by Miller. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Withdrawal of the rejection of claims 1-6, 8, 10-12, and 15-21 under 35 U.S.C. § 102(b) is respectfully requested.

B) Claims 9 and 13 are not obvious under 35 U.S.C. § 103(a) in view of Miller because Miller does not disclose, suggest, or consider the possibility of an evaporative device that has a porous wick extending through an opening in a container and a capillary member that has a surface in communication with a portion of the porous wick, the surface having nonporous capillary channels, as recited by independent claim 4, from which claims 9 and 13 depend.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. See MPEP § 2143.

The Supreme Court has held that the “teaching, suggestion, motivation” test should not be strictly applied, *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007), but the Court also noted that “a patent composed of several elements is not proved obvious merely

by demonstrating that each of its elements was, independently, known in the prior art.” *Id.* Instead, “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *Id.* For example, “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product is not of innovation but of ordinary skill and common sense.” *Id.* at 1742.

Claim 9 depends from claim 8, which depends from independent claim 4. Claim 13 depends directly from claim 4. Claim 4 recites an evaporative device that includes a container 1 for holding a liquid, wherein the container has an opening. The device further includes a porous wick 3 that extends through the opening such that a portion of the wick contacts the liquid held within the container 1 and a capillary plate 6 that has a surface in communication with a portion of the wick 3. The surface has nonporous capillary channels 7 that extend radially from the wick 3 along the surface of the capillary plate 6. The capillary channels 7 are substantially continuous along lengths thereof. Claim 8 depends directly from claim 4 and further recites portions of the capillary channels 7 in communication with a portion of the wick 3 extending outside of the container 1. Claim 9 recites that the capillary channels 7 are substantially V-shaped in cross section. Claim 13 recites plural capillary plates 6a, 6b each with one or more capillary channels 7 in communication with the portion of the wick 3 extending outside of the container 1.

No where in Miller is an evaporative device disclosed that has a porous wick extending through an opening in a container and a capillary plate that has a surface in communication with a portion of the wick, the surface having nonporous capillary channels, as recited in claims 9 and 13. In fact, the only porous-like structure disclosed in Miller is the liquid permeable absorbent matrix of the vapor-emanating means 17. However, the vapor-emanating means 17 does not extend through the opening of a container to contact the liquid held within the container, as recited by or arranged in the claims at issue.

Further, the only element that does extend through the opening of container 12 is the non-porous container 14 that is “constructed of thermoplastic compositions [including] polyethylene, polypropylene, polystyrene, polyvinyl acetate, polyamide, polymethacrylate,

and the like.” (See Column 4, lines 48-49 and 52-53). Additionally, the disclosure of Miller clearly indicates that the air freshener medium 22 can only be dispensed from the device 10 through a pierced membrane 20. (See Column 3, lines 41-57). Therefore, the container 14 must be impervious and thus non-porous to the air freshener medium 22.

Additionally, Miller discloses that the vapor-emanating means 17 can be “structurally integrated within the outer surface of the upside closed end of container 14. This type of vapor-emanating means can be in the form of grooves or striations which can function as effective nonporous capillary conduits.” (Column 3, lines 25-29). Importantly, “a liquid-permeable absorbent matrix 17...secured to the outer surface of the upside end of container 14” (Column 3, lines 23-24 and column 5, lines 5-6) cannot be “effective nonporous capillary conduits” that are “structurally integrated within the outer surface of...container 14.” (Column 3, lines 29 and 26-27, respectively).

Based on the above-noted disclosure of Miller, the Miller device either has a porous-like emanating structure as shown in FIGS. 1-5, 7, and 8, or a nonporous capillary conduit structure (not shown), but not a porous wick extending through an opening in a container and a capillary plate as recited in the above-noted claims. In fact, Miller teaches the liquid-permeable absorbent matrix and the non-porous capillary conduits as separate, non-combinable elements. Therefore, Miller does not teach or suggest an evaporative device that has a porous wick extending through an opening in a container and a capillary plate that has surface in communication with a portion of the wick, the surface having nonporous capillary channels, as recited in claims 9 and 13. Because Miller does not teach or suggest all the claim limitations of claims 9 and 13, claims 9 and 13 are not obvious under 35 U.S.C. § 103(a) over Miller. “To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” MPEP § 2143.03 citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Further, there is no basis provided to establish obviousness of claims 9 and 13 in view of Miller. The Supreme Court has held that the “teaching, suggestion, motivation” test should not be strictly applied, *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007), but the Court also noted that “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *Id.* Instead, “it can be important to identify a reason that would have prompted a person

of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *Id.*

Although the Office action dated January 30, 2007 states in regard to claim 9 that:

it would have been an obvious matter of design choice to a person having ordinary skill in the art to modify the capillary member by having a different orientation such that the capillary effect would occur...more along the grooves of a V-shaped cross-section, since the applicant has not disclosed that having these particular orientations solves any stated problem or is for any particular purpose[,] and it appears that the non-porous capillary member of Miller et al would perform equally well with any orientation as long as liquid within a containment (bottle) and having a porous wick in contact with the liquid allows the fluid to travel to the capillary member...;”

and in regard to claim 13, that:

Miller et al discloses the applicants primary inventive concept...but does not specifically recite an evaporative device having plural capillary plates[, and] it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains to have modified the evaporate device of Miller et al to accommodate multiple capillary plates[,] since it has been held that mere duplication of the essential working part of a device involves only routine skill in the art,”

it is clear that Miller did not consider the possibility of an evaporative device that includes a porous wick extending through an opening in a container and a capillary plate having a surface in communication with a portion of the wick, the surface having nonporous capillary channels, as recited in claim 4 from which claims 9 and 13 depend. This conclusion is supported by the reality that by modifying the Miller device as proposed, the purpose or function of the invention disclosed in Miller would be destroyed. Specifically, to modify the container 14 of Miller to be a porous wick would fundamentally change the principle of operation of the Miller device. Miller characterizes a typical wicking device stating that it “utilizes a combination of a wick and emanating region to dispense a volatile liquid from a liquid reservoir.” (Column 1, lines 36-38). Miller continues by contrasting the Miller

invention from such typical wicking devices by stating that “[o]f special interest with respect to the present invention are wicking dispenser devices in which the wicking action is promoted by a nonporous wick structure.” (Column 1, lines 42-44). Further, as stated in Column 2-3, lines 66-67 and 1-2, respectively, an “object of the invention [is] to provide an air freshener dispenser device in which a liquid air freshener is transported from an enclosed reservoir to a vapor-emanating surface by capillary action with a nonporous wick structure.” Thus, the principle of operation of the Miller invention embodies the use of a nonporous wicking feature not a porous wick. Therefore, the proposed modification of Miller to use a porous wick would fundamentally change the operation of the Miller device. “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” MPEP § 2143.01 (VI) citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Further, the January 30, 2007 Office action provides no evidence to suggest the recited combination of an evaporative device that includes a porous wick extending through an opening in a container and a capillary plate having a surface in communication with a portion of the wick, the surface having nonporous capillary channels, as recited in claims 9 and 13. Moreover, the January 30, 2007 Office action does not establish that there is an identified, predicted solution or that there was a design need or market pressure to make the device of Miller with the claimed combination of claims 9 and 13. Still further, there is no reasonable basis provided in the Office action that one skilled in the art would have pursued the known options within his or her technical grasp to make the proposed modification of Miller and arrive at the device recited in claims 9 and 13. Therefore, the rejection of claims 9 and 13 as obvious under 35 U.S.C. § 103(a) over Miller cannot be sustained. See *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742 (2007). Withdrawal of the rejection of claims 9 and 13 under 35 U.S.C. § 103(a) is therefore respectfully requested.

C) Claim 14 is not obvious under 35 U.S.C. § 103(a) in view of Miller because Miller does not disclose, suggest, or consider the possibility of an evaporative device that has a porous wick extending through an opening in a container and a capillary member that has a surface in communication with a portion of the porous wick, the surface having nonporous

capillary channels, and plural capillary plates that are movable such that the capillary plates are removable from contact with the portion of the wick extending outside of the container, as recited by claim 14.

Claim 14 depends directly from claim 13, which depends directly from independent claim 4. Claim 4 recites an evaporative device that includes a container 1 for holding a liquid, wherein the container has an opening. The device further includes a porous wick 3 that extends through the opening such that a portion of the wick contacts the liquid held within the container 1 and a capillary plate 6 that has a surface in communication with a portion of the wick 3. The surface has nonporous capillary channels 7 that extend radially from the wick 3 along the surface of the capillary plate 6. The capillary channels 7 are substantially continuous along lengths thereof. Claim 13 recites plural capillary plates 6a, 6b each with one or more capillary channels 7 in communication with the portion of the wick 3 extending outside of the container 1. Claim 14 recites the plural capillary plates 6a, 6b of claim 13 are movable such that the capillary plates are removable from contact with the portion of the wick 3 extending outside of the container 1.

No where in Miller is an evaporative device disclosed that has a porous wick extending through an opening in a container and a capillary plate that has a surface in communication with a portion of the wick, the surface having nonporous capillary channels, and plural capillary plates that are movable such that the capillary plates are removable from contact with the portion of the wick extending outside of the container, as recited in claim 14. In fact, the only porous-like structure disclosed in Miller is the liquid permeable absorbent matrix of the vapor-emanating means 17. However, the vapor-emanating means 17 does not extend through the opening of a container to contact the liquid held within the container, as recited by or arranged in the claims at issue.

Further, the only element that does extend through the opening of container 12 is the non-porous container 14 that is “constructed of thermoplastic compositions [including] polyethylene, polypropylene, polystyrene, polyvinyl acetate, polyamide, polymethacrylate, and the like.” (See Column 4, lines 48-49 and 52-53). Additionally, the disclosure of Miller clearly indicates that the air freshener medium 22 can only be dispensed from the device 10 through a pierced membrane 20. (See Column 3, lines 41-57). Therefore, the container 14 must be impervious and thus non-porous to the air freshener medium 22.

Additionally, Miller discloses that the vapor-emanating means 17 can be “structurally integrated within the outer surface of the upside closed end of container 14. This type of vapor-emanating means can be in the form of grooves or striations which can function as effective nonporous capillary conduits.” (Column 3, lines 25-29). Importantly, “a liquid-permeable absorbent matrix 17...secured to the outer surface of the upside end of container 14” (Column 3, lines 23-24 and column 5, lines 5-6) cannot be “effective nonporous capillary conduits” that are “structurally integrated within...container 14.” (Column 3, lines 29 and 26-27, respectively).

Based in the above-noted disclosure of Miller, the Miller device has a porous-like emanating structure as shown in FIGS. 1-5, 7, and 8, or a nonporous capillary conduit structure (not shown), but not a porous wick extending through an opening in a container and a capillary plate as recited in the above-noted claims. In fact, Miller teaches the liquid-permeable absorbent matrix and the non-porous capillary conduits as separate, non-combinable elements. Further, Miller’s statement that the vapor-emanating means 17 can be “structurally integrated within the outer surface of the upside closed end of container 14,” does not suggest plural capillary plates that are movable such that the capillary plates are removable from contact with a portion of a wick. In fact, one skilled in the art would understand that a vapor-emanating means 17 structurally integrated within the outer surface of the upside closed end of container 14 to be static and not removable from container 14. Therefore, the disclosure of Miller does not teach or suggest all the claim limitations of claim 14. Further, claim 14 is not obvious under 35 U.S.C. § 103(a) over Miller because Miller does not teach or suggest all the claim limitations of claim 14. “To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” MPEP § 2143.03 citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Further, there is no basis provided to establish obviousness of claim 14 in view of Miller. Although the Supreme Court has held that the “teaching, suggestion, motivation” test should not be strictly applied, *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007), the Court also noted that “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *Id.* Instead, “it can be important to identify a reason that would have prompted a person of

ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *Id.*

Although, the Office action dated January 30, 2007 states in regard to claim 14 that:

Miller et al discloses the applicants primary inventive concept...but does not specifically recite an evaporative device having plural capillary plates[, and] it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains to have modified the evaporate device of Miller et al to accommodate multiple capillary plates[,] since it has been held that mere duplication of the essential working part of a device involves only routine skill in the art,”

it is clear that Miller did not disclose the possibility of an evaporative device that includes a porous wick extending through an opening in a container and a capillary plate having a surface in communication with a portion of the wick, the surface having nonporous capillary channels, and plural capillary plates that are movable such that the capillary plates are removable from contact with the portion of the wick extending outside of the container, as recited in claim 14. This conclusion is supported by the reality that by modifying the Miller device as proposed, the purpose or function of the invention disclosed in Miller would be destroyed. Specifically, to modify the container 14 of Miller to be a porous wick would fundamentally change the principle of operation of the Miller device. Miller characterizes a typical wicking device stating that it “utilizes a combination of a wick and emanating region to dispense a volatile liquid from a liquid reservoir.” (Column 1, lines 36-38). Miller continues by contrasting the Miller invention from such typical wicking devices by stating that “[o]f special interest with respect to the present invention are wicking dispenser devices in which the wicking action is promoted by a nonporous wick structure.” (Column 1, lines 42-44). Further, as stated in Column 2-3, lines 66-67 and 1-2, respectively, an “object of the invention [is] to provide an air freshener dispenser device in which a liquid air freshener is transported from an enclosed reservoir to a vapor-emanating surface by capillary action with a nonporous wick structure.” Thus, the principle of operation of the Miller invention embodies the use of a nonporous wicking feature not a porous wick. Therefore, the proposed modification of Miller to use a porous wick would fundamentally change the operation of the Miller device. “If the proposed modification or combination of the prior art would change

the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” MPEP § 2143.01 (VI) citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Further, the January 30, 2007 Office action provides no evidence to suggest the recited combination of an evaporative device that includes a porous wick extending through an opening in a container and a capillary plate having a surface in communication with a portion of the wick, the surface having nonporous capillary channels nor the additional combination of plural capillary plates that are movable such that the capillary plates are removable from contact with the portion of the wick extending outside of the container, as recited in claim 14. Moreover, the January 30, 2007 Office action does not establish that there is an identified, predicted solution or that there was a design need or market pressure to make the device of Miller with the claimed combination of claim 14. Still further, there is no reasonable basis provided in the Office action that one skilled in the art would have pursued the known options within his or her technical grasp to make the proposed modification of Miller and arrive at the device recited in claim 14. Therefore, the rejection of claim 14 as obvious under 35 U.S.C. § 103(a) over Miller cannot be sustained. See *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742 (2007). Withdrawal of the rejection of claim 14 under 35 U.S.C. § 103(a) is therefore respectfully requested.

D) Because Miller does not disclose or suggest a porous wick extending through an opening in a container, the wick including an aperture formed in a portion of the wick in an axial direction and a nonporous capillary member with at least one capillary channel formed thereon and that is a capillary insert disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick, claim 22 is not obvious under 35 U.S.C. § 103(a) in view of Miller.

Independent claim 22 recites an evaporative device that includes a container 1 for holding a liquid, wherein the container has an opening. The evaporative device further includes a porous wick 3, 3a that extends through the opening such that a portion of the wick contacts the liquid held within the container 1. A portion of the wick 3, 3a is exposed to the ambient environment, and the wick transfers the liquid from the container 1. The evaporative

device further includes a nonporous capillary member 6, 8 that has a surface in communication with a portion of the wick 3, 3a. One or more capillary pathways 7, 9 are disposed along the surface of the capillary member 6, 8 along which liquid, transferred by the wick 3, 3a from the container 1, is drawn by capillary action for dispersion to the ambient air. The capillary member 6, 8 is a capillary insert with at least one capillary channel 7, 9 formed thereon. A portion of the at least one capillary channel 7, 9 is in communication with a portion of the wick 3, 3a such that the capillary channel transfers liquid from the wick for dispersion to the ambient environment. The wick 3a includes an aperture formed in a portion of the wick in an axial direction. The capillary insert 8 is disposed within the aperture such that the at least one capillary channel 7, 9 is in contact with an inner surface 3i of the wick 3a to transfer liquid from the wick to the capillary channel for dispersion to the ambient environment.

No where in Miller is an evaporative device disclosed that has a porous wick extending through an opening in a container, the wick including an aperture formed in a portion of the wick in an axial direction and a nonporous capillary member with at least one capillary channel formed thereon and that is a capillary insert disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick. In fact, the only porous-like structure disclosed in Miller is the liquid permeable absorbent matrix of the vapor-emanating surface 17. However, the vapor-emanating surface 17 does not extend through the opening of a container to contact the liquid held within the container, as recited by or arranged in the claims at issue.

Further, the only element that does extend through the opening of container 12 is the non-porous container 14 that is “constructed of thermoplastic compositions [including] polyethylene, polypropylene, polystyrene, polyvinyl acetate, polyamide, polymethacrylate, and the like.” (See Column 4, lines 48-49 and 52-53). Additionally, the disclosure of Miller clearly indicates that the air freshener medium 22 can only be dispensed from the device 10 through a pierced membrane 20. (See Column 3, lines 41-57). Therefore, the container 14 must be impervious and thus non-porous to the air freshener medium 22.

Additionally, Miller discloses that the vapor-emanating means 17 can be “structurally integrated within the outer surface of the upside closed end of container 14. This type of vapor-emanating means can be in the form of grooves or striations which can function as

effective nonporous capillary conduits.” (Column 3, lines 25-29). Importantly, “a liquid-permeable absorbent matrix 17...secured to the outer surface of the upside end of container 14” (Column 3, lines 23-24 and column 5, lines 5-6) cannot be “effective nonporous capillary conduits” that are “structurally integrated within...container 14.” (Column 3, lines 29 and 26-27, respectively).

Based on the above-noted disclosure of Miller, the Miller device either has a porous-like emanating structure as shown in FIGS. 1-5, 7, and 8, or a nonporous capillary conduit structure (not shown), but not a porous wick extending through an opening in a container and a capillary plate as recited in the above-noted claims. In fact, Miller teaches the liquid-permeable absorbent matrix and the non-porous capillary conduits as separate, non-combinable elements. As seen in FIG. 1, the vapor-emanating means 17 arguably has an aperture therethrough in an axial direction (parallel to the capillary space created by nesting container 14 within container 12) through which the key 30 protrudes. The key 30 is a structural extension of container 14 that secures a cap cover 25 to the container 14 via a slot 28 interlock (Column 4, line 14-17). However, Miller does not teach or suggest that the key 30 is a nonporous capillary member with at least one capillary channel formed thereon, nor that it is a capillary insert disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick, as recited in claim 22. Therefore, Miller does not teach or suggest a porous wick extending through an opening in a container, the wick including an aperture formed in a portion of the wick in an axial direction and a nonporous capillary member with at least one capillary channel formed thereon and that is a capillary insert disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick, as recited in claim 22. Because Miller does not teach or suggest a porous wick extending through an opening in a container, the wick including an aperture formed in a portion of the wick in an axial direction and a nonporous capillary member with at least one capillary channel formed thereon and that is a capillary insert disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick claim 22 is not obvious under 35 U.S.C. § 103(a) over Miller. “To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” MPEP § 2143.03 citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Further, there is no basis provided to establish obviousness of claim 22 in view of Miller. The Supreme Court has held that the “teaching, suggestion, motivation” test should not be strictly applied, *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007), but the Court also noted that “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *Id.* Instead, “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *Id.*

Although, the Office action dated January 30, 2007 states in regard to claim 22 that:

Miller et al does not particularly disclose [that] the capillary member channels...extend axially, however, it would have been an obvious matter of design choice to a person having ordinary skill in the art to modify the capillary member by having a different orientation such that the capillary effect would occur axial[ly]..., since the applicant has not disclosed that having these particular orientations solves any stated problem or is for any particular purpose and it appears that the non-porous capillary member of Miller et al would perform equally well with any orientation as long as liquid within a containment (bottle) and having a porous wick in contact with the liquid allows the fluid to travel to the capillary member...,”

it is clear that Miller did not consider the possibility of a porous wick extending through an opening in a container, the wick including an aperture formed in a portion of the wick in an axial direction and a nonporous capillary member with at least one capillary channel formed thereon and that is a capillary insert disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick, as recited in claim 22. This conclusion is supported by the reality that by modifying the Miller device as proposed, the purpose or function of the invention disclosed in Miller would be destroyed. Specifically, to modify the container 14 of Miller to be a porous wick would fundamentally change the principle of operation of the Miller device. Miller characterizes a typical wicking device stating that it “utilizes a combination of a wick and emanating region to dispense a volatile liquid from a liquid reservoir.” (Column 1, lines 36-38). Miller continues by contrasting the Miller invention from such typical wicking devices by stating that “[o]f special interest with

respect to the present invention are wicking dispenser devices in which the wicking action is promoted by a nonporous wick structure.” (Column 1, lines 42-44). Further, as stated in Column 2-3, lines 66-67 and 1-2, respectively, an “object of the invention [is] to provide an air freshener dispenser device in which a liquid air freshener is transported from an enclosed reservoir to a vapor-emanating surface by capillary action with a nonporous wick structure.” Thus, the principle of operation of the Miller invention embodies the use of a nonporous wicking feature not a porous wick. Therefore, the proposed modification of Miller to use a porous wick would fundamentally change the operation of the Miller device. “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” MPEP § 2143.01 (VI) citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Further, the statements from the January 30, 2007 Office action provide no evidence to suggest the recited combination of a porous wick extending through an opening in a container, the wick including an aperture formed in a portion of the wick in an axial direction and a nonporous capillary member with at least one capillary channel formed thereon and that is a capillary insert disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick, as recited in claim 22. Moreover, the January 30, 2007 Office action does not establish that there is an identified, predicted solution or that there was a design need or market pressure to make the device of Miller with the claimed combination of claim 22. Still further, there is no reasonable basis provided in the Office action that one skilled in the art would have pursued the known options within his or her technical grasp to make the proposed modification of Miller and arrive at the device recited in claim 22. Therefore, the rejection of claim 22 as obvious under 35 U.S.C. § 103(a) over Miller cannot be sustained. See *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742 (2007). Withdrawal of the rejection of claim 22 under 35 U.S.C. § 103(a) is therefore respectfully requested.

E) Miller does not disclose or suggest a porous wick extending through an opening in a container, the wick including an aperture formed in a portion of the wick in an axial direction and a nonporous capillary member with at least one capillary channel formed

thereon and that is a capillary insert disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick and that the capillary insert is slidable within the wick, claim 23 is not obvious under 35 U.S.C. § 103(a) in view of Miller.

Independent claim 23 recites an evaporative device that includes a container 1 for holding a liquid, wherein the container has an opening. The device further includes a porous wick 3, 3a that extends through the opening such that a portion of the wick contacts the liquid held within the container 1. A portion of the wick 3, 3a is exposed to the ambient environment, and the wick transfers the liquid from the container 1. The evaporative device further includes a nonporous capillary member 6, 8 that has a surface in communication with a portion of the wick 3, 3a. One or more capillary pathways 7, 9 are disposed along the surface of the capillary member 6, 8 along which liquid, transferred by the wick 3, 3a from the container 1, is drawn by capillary action for dispersion to the ambient air. The capillary member 6, 8 is a capillary insert with at least one capillary channel 7, 9 formed thereon. A portion of the at least one capillary channel 7, 9 is in communication with a portion of the wick 3, 3a such that the capillary channel transfers liquid from the wick for dispersion to the ambient environment. The wick 3a includes an aperture formed in a portion of the wick in an axial direction. The capillary insert 8 is disposed within the aperture such that the at least one capillary channel 7, 9 is in contact with an inner surface 3i of the wick 3a to transfer liquid from the wick to the capillary channel for dispersion to the ambient environment. The capillary insert 8 is slidable within the wick 3a.

No where in Miller is an evaporative device disclosed that has a porous wick extending through an opening in a container, the wick including an aperture formed in a portion of the wick in an axial direction and a nonporous capillary member with at least one capillary channel formed thereon and that is a capillary insert disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick and that the capillary insert is slidable with the wick. In fact, the only porous-like structure disclosed in Miller is the liquid permeable absorbent matrix of the vapor-emanating means 17. However, the vapor-emanating means 17 does not extend through the opening of a container to contact the liquid held within the container, as recited by or arranged in the claims at issue.

Further, the only element that does extend through the opening of container 12 is the non-porous container 14 that is “constructed of thermoplastic compositions [including] polyethylene, polypropylene, polystyrene, polyvinyl acetate, polyamide, polymethacrylate, and the like.” (See Column 4, lines 48-49 and 52-53). Additionally, the disclosure of Miller clearly indicates that the air freshener medium 22 can only be dispensed from the device 10 through a pierced membrane 20. (See Column 3, lines 41-57). Therefore, the container 14 must be impervious and thus non-porous to the air freshener medium 22.

Additionally, Miller discloses that the vapor-emanating means 17 can be “structurally integrated within the outer surface of the upside closed end of container 14. This type of vapor-emanating means can be in the form of grooves or striations which can function as effective nonporous capillary conduits.” (Column 3, lines 25-29). Importantly, “a liquid-permeable absorbent matrix 17...secured to the outer surface of the upside end of container 14” (Column 3, lines 23-24 and column 5, lines 5-6) cannot be “effective nonporous capillary conduits” that are “structurally integrated within...container 14.” (Column 3, lines 29 and 26-27, respectively).

Based on the above-noted disclosure of Miller, the Miller device either has a porous-like emanating structure as shown in FIGS. 1-5, 7, and 8, or a nonporous capillary conduit structure (not shown), but not a porous wick extending through an opening in a container and a capillary plate as recited in the above-noted claims. In fact, Miller teaches the liquid-permeable absorbent matrix and the non-porous capillary conduits as separate, non-combinable elements. As seen in FIG. 1, the vapor-emanating means 17 arguably has an aperture therethrough in an axial direction (parallel to the capillary space created by nesting container 14 within container 12) through which the key 30 protrudes. The key 30 is a structural extension of container 14 that secures a cap cover 25 to the container 14 via a slot 28 interlock (Column 4, line 14-17). Moreover, the container 14 is “typically...injection or thermoform molded from a polymer.” (Column 4, 48-51). One skilled in the art would understand that the key 30 as a structural extension of an injection or thermoform molded polymer container 14 would be rigidly associated with container 14 and not slidable. Therefore, Miller does not teach or suggest a porous wick extending through an opening in a container, the wick including an aperture formed in a portion of the wick in an axial direction and a nonporous capillary member with at least one capillary channel formed thereon and that

is a capillary insert disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick, and that the capillary insert is slidable with the wick, as recited in claim 23. Because Miller does not teach or suggest a porous wick extending through an opening in a container, the wick including an aperture formed in a portion of the wick in an axial direction and a nonporous capillary member with at least one capillary channel formed thereon and that is a capillary insert disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick and that the capillary insert is slidable with the wick, claim 23 is not obvious under 35 U.S.C. § 103(a) over Miller. “To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” MPEP § 2143.03 citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Moreover, there is no basis provided to establish obviousness of claim 23 in view of Miller. The Supreme Court has held that the “teaching, suggestion, motivation” test should not be strictly applied, *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007), but the Court also noted that “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *Id.* Instead, “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *Id.*

Although the Office action dated January 30, 2007 states in regard to claim 23 that:

Miller et al does not particularly disclose [that] the capillary member channels...extend axially, however, it would have been an obvious matter of design choice to a person having ordinary skill in the art to modify the capillary member by having a different orientation such that the capillary effect would occur axial[ly]..., since the applicant has not disclosed that having these particular orientations solves any stated problem or is for any particular purpose and it appears that the non-porous capillary member of Miller et al would perform equally well with any orientation as long as liquid within a containment (bottle) and having a porous wick in contact with the liquid allows the fluid to travel to the capillary member...,”

it is clear that Miller did not consider the possibility of a porous wick extending through an opening in a container, the wick including an aperture formed in a portion of the wick in an axial direction and a nonporous capillary member with at least one capillary channel formed thereon and that is a capillary insert disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick and that the capillary insert is slidable within the wick, as recited in claim 23. This conclusion is supported by the reality that by modifying the Miller device as proposed, the purpose or function of the invention disclosed in Miller would be destroyed. Specifically, to modify the container 14 of Miller to be a porous wick would fundamentally change the principle of operation of the Miller device. Miller characterizes a typical wicking device stating that it “utilizes a combination of a wick and emanating region to dispense a volatile liquid from a liquid reservoir.” (Column 1, lines 36-38). Miller continues by contrasting the Miller invention from such typical wicking devices by stating that “[o]f special interest with respect to the present invention are wicking dispenser devices in which the wicking action is promoted by a nonporous wick structure.” (Column 1, lines 42-44). Further, as stated in Column 2-3, lines 66-67 and 1-2, respectively, an “object of the invention [is] to provide an air freshener dispenser device in which a liquid air freshener is transported from an enclosed reservoir to a vapor-emanating surface by capillary action with a nonporous wick structure.” Thus, the principle of operation of the Miller invention embodies the use of a nonporous wicking feature not a porous wick. Therefore, the proposed modification of Miller to use a porous wick would fundamentally change the operation of the Miller device. “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” MPEP § 2143.01 (VI) citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Further, the January 30, 2007 Office action provides no evidence to suggest the recited combination of a porous wick extending through an opening in a container, the wick including an aperture formed in a portion of the wick in an axial direction and a nonporous capillary member with at least one capillary channel formed thereon and that is a capillary insert disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick, and that the capillary insert is slidable within the wick, as

recited in claim 23. Moreover, the January 30, 2007 Office action does not establish that there is an identified, predicted solution or that there was a design need or market pressure to make the device of Miller with the claimed combination of claim 23. Still further, there is no reasonable basis provided in the Office action that one skilled in the art would have pursued the known options within his or her technical grasp to make the proposed modification of Miller and arrive at the device recited in claim 23. Therefore, the rejection of claim 23 as obvious under 35 U.S.C. § 103(a) over Miller cannot be sustained. See *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742 (2007). Withdrawal of the rejection of claim 23 under 35 U.S.C. § 103(a) is therefore respectfully requested.

F) Conclusion

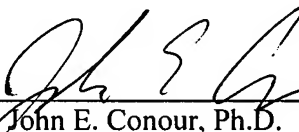
Because the Miller does not disclose, suggest, or consider the possibility of all of the elements recited by the claims at issue, it follows that such claims are not anticipated or rendered obvious thereby. Therefore, applicant maintains that the rejection of claims 1-6, 8, 10-12, and 15-21 under 35 U.S.C. § 102(b) and claims 9, 13, 14, 22, and 23 under 35 U.S.C. § 103(a) cannot be sustained and respectfully requests withdrawal of the pending grounds of rejection and allowance of the claims at issue.

Respectfully submitted,

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(viii) Claims appendix.

1. An evaporative device, comprising:
a container for holding a liquid, the container having an opening;
a porous wick extending through the opening such that a portion of the wick contacts the liquid held within the container and a portion of the wick is exposed to the ambient environment, where the wick transfers the liquid from the container; and
a capillary member having a surface in communication with a portion of the wick, the capillary member having a nonporous capillary channel that extends radially from the wick.
2. An evaporative device according to claim 1, wherein the capillary member is a capillary plate having one or more capillary channels, and
wherein a portion of the capillary channels is in communication with a portion of the wick such that the capillary channels, transfer liquid from the wick for dispersion to the ambient environment.
3. An evaporative device according to claim 2, wherein the capillary plate is substantially wing shaped.
4. An evaporative device, comprising:
a container for holding a liquid, the container having an opening;
a porous wick extending through the opening such that a portion of the wick contacts the liquid held within the container and a portion of the wick extends outside of the container such that the wick transfers the liquid from the container; and
a capillary plate having a surface in communication with a portion of the wick, wherein the surface has nonporous capillary channels that extend radially from the wick along the surface of the capillary plate, and wherein the capillary channels are substantially continuous along lengths thereof.
5. An evaporative device according to claim 4, wherein the capillary plate is nonporous.

6. An evaporative device according to claim 4, wherein the capillary plate is substantially wing shaped.

8. An evaporative device according to claim 4, wherein portions of the capillary channels are in communication with a portion of the wick extending outside the container.

9. An evaporative device according to claim 8, wherein the capillary channels are substantially V-shaped in cross section.

10. An evaporative device according to claim 4, wherein the capillary plate is detachably secured to one or both of the wick and the container.

11. An evaporative device according to claim 4, wherein the surface is one of a top and a bottom of the capillary plate.

12. An evaporative device, comprising:
a container for holding a liquid, the container having an opening;
a porous wick extending through the opening such that a portion of the wick contacts the liquid held within the container and a portion of the wick extends outside of the container such that the wick transfers the liquid from the container;
a cover that encases a portion of the portion of the wick extending outside of the container; and
a capillary plate having a surface in communication with a portion of the wick, wherein the surface has one or more capillary pathways along which liquid, transferred by the wick from the container, is drawn by capillary action for dispersion to the ambient environment, wherein the capillary pathways are substantially continuous along lengths thereof.

13. An evaporative device according to claim 4, wherein there are plural capillary plates, each having one or more capillary channels, and the capillary channels are in communication with the portion of the wick extending outside of the container.

14. An evaporative device according to claim 13, wherein the plural capillary plates are movable such that the capillary channels of each are removable from communication with the portion of the wick extending outside of the container.

15. An evaporative device, comprising:
a container for holding a liquid, the container having an opening;
a porous wick extending through the opening such that a portion of the wick contacts the liquid held within the container and a portion of the wick extends outside of the container such that the wick transfers the liquid from the container;
a capillary plate having a surface in communication with a portion of the wick, wherein the surface has one or more capillary pathways along which liquid, transferred by the wick from the container, is drawn by capillary action for dispersion to the ambient environment, wherein the capillary pathways are substantially continuous along lengths thereof, wherein there are plural capillary plates, each having one or more capillary pathways, and the capillary pathways are in communication with the portion of the wick extending outside of the container, wherein the plural capillary plates are movable such that the capillary pathways of each are removable from communication with the portion of the wick extending outside of the container, and wherein the plural capillary plates are actuatable in a direction away from the wick to separate the capillary pathways thereof from communication with the portion of the wick exposed to the ambient air.

16. An evaporative device according to claim 4, wherein the capillary channels are exposed on the surface of the capillary plate.

17. An evaporative device according to claim 4, wherein the capillary plate is composed of polyethylene.

18. An evaporative system, comprising:
an evaporative device according to claim 4; and
a housing for containing at least a portion of the evaporative device.

19. An evaporative system according to claim 18, wherein the evaporative device is detachably attached to the housing.

20. An evaporative system according to claim 18, wherein the capillary plate is fixed to the housing, and the container and the wick are detachably attachable to the housing and the capillary plate.

21. An evaporative device according to claim 1, wherein the capillary member is a capillary insert with at least one nonporous capillary channel formed thereon, wherein a portion of the at least one nonporous capillary channel is in communication with a portion of the wick such that the nonporous capillary channel transfers liquid from the wick for dispersion to the ambient environment.

22. An evaporative device, comprising:

a container for holding a liquid, the container having an opening;

a porous wick extending through the opening such that a portion of the wick contacts the liquid held within the container and a portion of the wick is exposed to the ambient environment, where the wick transfers the liquid from the container; and

a nonporous capillary member having a surface in communication with a portion of the wick, wherein one or more capillary pathways are disposed along the surface of the capillary member along which liquid, transferred by the wick from the container, is drawn by capillary action for dispersion to the ambient air, wherein the capillary member is a capillary insert with at least one capillary channel formed thereon, wherein a portion of the at least one capillary channel is in communication with a portion of the wick such that the capillary channel transfers liquid from the wick for dispersion to the ambient environment; wherein the wick includes an aperture formed in a portion of the wick in an axial direction; and

wherein the capillary insert is disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick to transfer liquid from the wick to the capillary channel for dispersion to the ambient environment.

23. An evaporative device, comprising:

a container for holding a liquid, the container having an opening;

a porous wick extending through the opening such that a portion of the wick contacts the liquid held within the container and a portion of the wick is exposed to the ambient environment, where the wick transfers the liquid from the container; and

a nonporous capillary member having a surface in communication with a portion of the wick, wherein one or more capillary pathways are disposed along the surface of the capillary member along which liquid, transferred by the wick from the container, is drawn by capillary action for dispersion to the ambient air, wherein the capillary member is a capillary insert with at least one capillary channel formed thereon, wherein a portion of the at least one capillary channel is in communication with a portion of the wick such that the capillary channel transfers liquid from the wick for dispersion to the ambient environment, wherein the wick includes an aperture formed in a portion of the wick in an axial direction, wherein the capillary insert is disposed within the aperture such that the at least one capillary channel is in contact with an inner surface of the wick to transfer liquid from the wick to the capillary channel for dispersion to the ambient environment, and wherein the capillary insert is slidable within the wick.

(ix) Evidence appendix.

-- none --

(x) Related proceedings appendix.

-- none --